

eXtremeRAID 1100 PCI to Ultra2 SCSI RAID Controller





P/N: 775031-00



eXtremeRAID[™] Quick Installation Guide

eXtremeRAID 1100 DAC1164P™ PCI to Ultra2 SCSI RAID Controller

Part Number 775031-00

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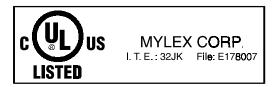
FC Federal Communications Commission

The FCC information statements are in Appendix C of the eXtremeRAID Installation Guide (P/N 775013).

C Community of Europe

The CE information statements are in Appendix C of the eXtremeRAID Installation Guide (P/N 775013).

Underwriters Laboratories



WARNING

This controller is furnished with a nonvolatile RAM (NVRAM) chip that uses a sealed lithium battery/crystal module. Replace the module only with the same or equivalent type recommended by the manufacturer. Dispose of the used battery/crystal module according to the manufacturer's instructions. Never incinerate a battery as it could explode and cause serious injury.

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Hardware

Introduction

The eXtremeRAID 1100 (DAC1164P) is a very versatile PCI to Ultra2 SCSI, LVD RAID controller. There are thousands of possible hardware configurations. The following parameters are assumed:

- A RAID 0, 1, or 5 configuration is being installed.
- The user is familiar with Windows NT® or Novell® NetWare®.
- The user is familiar with disk drive and RAID terminology.

Performing an Installation



STOP WARNING

To avoid electrical shock, do not attempt to perform this hardware installation with power on. Disconnect the system from the electrical wall outlet.

Connectors, Jumpers, and LEDs

Up to three Ultra2 SCSI channels are supported on the controller. The SCSI connector locations are shown in Figure 1.

All the jumpers should normally be set to their (default settings). See Table 1 for default jumper settings. Jumper locations are shown in Figure 1.

The controller has 15 LEDs that are active indicators while the controller is running. The LEDs indicate termination type and status, SCSI activity, cache status, diagnostic status, and host activity. The LED locations and meanings are shown in Figure 1.

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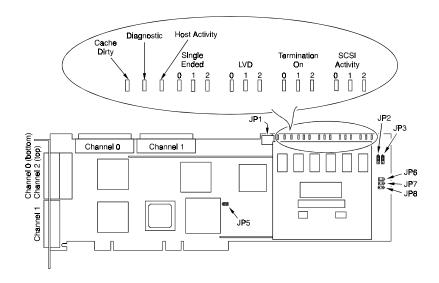


Figure 1. eXtremeRAID with Component Locations

Table 1. Jumper and Connector Descriptions

Jumper	Description	Default Setting
JP1	serial port connector	_
JP2	pins 1–2 for Arm Proc, pins 2–3 for I2O	1–2
JP3	pins 1–2 normal , pins 2–3 blank ROM mode	1–2
JP5	must be installed	on
JP6	maintenance – do not use	off
JP7	ROM emulator – do not use	off
JP8	Mylex manufacturing diagnostics – do not use	off

Installing the eXtremeRAID into the System Board

1. With the power off, plug the eXtremeRAID card into an available 32-bit or 64-bit PCI slot (refer to Figure 2).

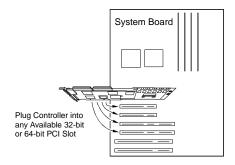


Figure 2. Plugging the eXtremeRAID 1100 into a PCI Slot

2. Set the SCSI ID on each internal drive to a unique address between 0 and 15, but do not use address 7, as it is reserved for the controller. See the documentation that comes with your drives for instructions on how to do this.



A Caution

If internal and external drives are used, be sure that no drive addresses are duplicated. External SCSI cabinets usually automatically assign drive addresses according to where in the cabinet the drives are located.

- 3. Be sure termination is *disabled* on all drives connected to the controller. See the documentation that comes with your drives for instructions on how to do this.
- 4. Be sure that termination power is *enabled* on all drives connected to the controller. See the documentation that comes with your drives for instructions on how to do this.
- 5. Connect a wide, high-density, 68-pin SCSI ribbon cable to the internal SCSI connectors on the eXtremeRAID controller and connect the other cable connectors to any internal SCSI drives as required. See Figure 3.
- 6. Connect an active terminator to the end of the SCSI ribbon cable at the end farthest from the controller. See Figure 3.

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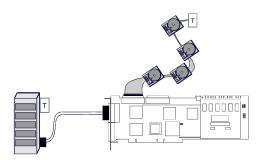


Figure 3. Connecting Internal and External Drives

7. Connect a wide, round, 68-pin Very High Density Connector Interface (VHDCI) cable to the external SCSI connector on the eXtremeRAID controller and connect the other end of the cable to an external drive cabinet as required. See Figure 3. External drive cabinets usually have termination built into the end of the SCSI bus. Check the documentation that comes with your drive cabinet to be sure this is the case. If not, use an active terminator at the end of the bus.



The eXtremeRAID controller automatically determines whether or not its own on-board termination is required, and automatically enables or disables on-board termination as necessary.

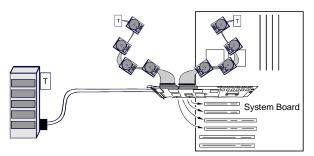


Figure 4. eXtremeRAID in a Typical Installation

The hardware portion of the installation is complete.

Continue on to "RAID Configuration" on page 5.

RAID Configuration

Using RAID EzAssist

RAID EzAssist, the on-board BIOS Configuration Utility is used to build several types of RAID configurations. Since this is a Quick Installation Guide, only the Automatic Configuration option will be described here.

≪ Note

A first time installation is being assumed.

The following limitations apply to Automatic Configuration:

- Only one array will be configured using the Automatic Configuration option.
- All drives being controlled by the eXtremeRAID board can be different sizes, but will all be formatted to the size of the smallest disk controlled by the eXtremeRAID board.
- A maximum of 7 drives can be configured into an array using Automatic Configuration. Any additional drives will become hot spares. The drives with the largest capacity (if mixed drive sizes are used) will be the drives selected to become hot spares.

≪ Note

If you want to do anything other than an automatic configuration, refer to the RAID EzAssist Configuration Utility User Reference Guide.

To perform a RAID configuration with the Automatic Configuration option using RAID EzAssist, do the following:

- Power on any external disk enclosures connected to the eXtremeRAID controller.
- 2. Power on the computer. The eXtremeRAID controller is furnished with the BIOS enabled by default.
- 3. Watch the messages on the screen for the following prompt to be displayed:

Press <ALT-M> for BIOS options

Wait approximately 5 seconds. Do *not* press any keys at this time.



If the BIOS has been disabled on the controller, You will need to press Alt–M to enable it (See your controller's Installation Guide for details).

4. Watch the messages on the screen for the following prompt to be displayed:

Press <ALT-R> for RAID Configuration options

5. Press **Alt–R** to get into RAID EzAssist (the configuration utility).



For more detailed information on how to run the RAID EzAssist, refer to the *RAID EzAssist Configuration Utility User Reference Guide* (P/N 775029), which is included on the distribution CD-ROM.

The utility will scan all available drive channels for SCSI devices. Upon completion of the scan, the following will occur under the following conditions:

a. More than one controller:

```
Select Controller
```

will appear on the screen. In this case use the arrow keys to select the controller you wish to configure and press **Enter**. This causes condition **b**

b. Either one controller, or a controller was selected in **a**, *and* no RAID configuration exists:

```
No existing RAID configuration has been detected. Would you like to configure a RAID drive now?

[Yes] No
```

Select **Yes** with the arrow keys and Press **Enter**. This takes you to step 6.

6. The following options appear:

Automatic Assisted Custom

Select Automatic. Press Enter.



The Scope of this Quick Reference Guide only covers Automatic Configuration. For information on performing Assisted or Custom RAID configurations, refer to the *RAID EzAssist Configuration Utility User Reference Guide* (P/N 775029).

A summary display of the configuration will appear. Up to 5 lines will be displayed. If more than 5 SCSI drives are physically connected to the controller, press **Page Down** to see up to 5 more lines.

7. Select Apply. Press Enter.

The Array will be automatically configured. The program will indicate that Automatic Configuration is in progress until the configuration finishes. Upon completion, the following prompt will be displayed:

```
RAID drive configuration is successful. You may utilize this drive immediately.

[Reboot] Main Menu
```

8. Select **Main Menu** and press **Enter** if you want to further examine the configuration.

Or Select **Reboot** and press **Enter** to restart your system.

Go on to "Operating Systems and Drivers" on page 8.

Operating Systems and Drivers

NetWare

Installing the Mylex Disk Array Controller as the Primary NetWare 4.11/4.2 Controller

If the Mylex Disk Array Controller will be the primary (bootable) controller, you must install the controller driver at the time of NetWare 4.11/4.2 installation.

The procedure below assumes that the CD-ROM drivers are available.

 Boot the system from a newly created DOS boot drive, and then create (or edit) the CONFIG.SYS and AUTOEXEC.BAT files to include the drivers required for accessing the CD-ROM as a logical drive under DOS. The following example assigns the CD-ROM as drive D: under MS-DOS 6.00 or above. CONFIG.SYS contains the statements:

```
device = [pathname]\aspidac.sys
device = [pathname]\btcdrom.sys /D:[devicename]
AUTOEXEC.BAT contains the statement:
```

[pathname]\mscdex /v /m:10 /D:[devicename]
The device name is that of the specific CD-ROM drive

The device name is that of the specific CD-ROM drive (e.g., MSCD001).

- 2. Boot the system with the new CONFIG.SYS and AUTOEXEC.BAT, and make sure the NetWare CD-ROM files are accessible under DOS.
- 3. Follow the standard NetWare 4.11/4.2 upgrade or installation procedure, as described in the NetWare 4.11/4.2 documentation.
- 4. Insert the NT/NW drivers diskette into the floppy disk drive when the installation program prompts you to insert the vendor-supplied disk. The installation program will scan the diskette for all available drivers. Select the NetWare 4.11/4.2 driver from the list.

MDAC.HAM

5. After the NetWare 4.11/4.2 installation is complete, copy the files in the \NW subdirectory of the NT/NW drivers diskette to SYS:SYSTEM of the NetWare 4.11/4.2 server.

To install GAM server, refer to the *Disk Array Controller Software Kit Installation Guide and User Manual* (P/N 771929). To install the GAM client, (on a client Windows 95 or NT workstation) refer to the *Global Array Manager Client Software Installation Guide and User Manual* (P/N 771961).

Installing the Mylex Disk Array Controller into an Existing NetWare 4.11/4.2 System

If NetWare 4.11/4.2 is already installed and you wish to add a Mylex Disk Array Controller later, the controller will be a secondary (non-bootable) controller. After installing the controller hardware and configuring a disk array, follow the procedure below to add the necessary controller drivers.

- With NetWare Server 4.11/4.2 loaded and running, load the NetWare program INSTALL.NLM by typing the following at the console prompt:
 - : load install and press < Enter >.
- 2. Choose "Driver Options" in the Installation Options menu.
- 3. Choose "Configure disk and storage device drivers" in the Driver Options menu.
- 4. Choose "Select an additional driver" in the Additional Driver Actions menu.
 - NetWare scans for controllers that do not have drivers already loaded.
- At the "Select a driver" box, press <Ins> to choose to install an unlisted driver.
- 6. Insert the NT/NW drivers diskette into the diskette drive.
- 7. Press **<F3>** to specify the path of the NetWare driver you're about to install.
- 8. Change the path line to read:

A:\nw

and press **<Enter>**. NetWare scans for drivers on the floppy diskette in the specified path.

- 9. In the "Select a driver to install" box, select the following driver:
- MDAC.HAM | Mylex Disk Array Controller HAM Driver
- 10. Select **Yes** at the confirmation box to install the driver.
- 11. Press **<Enter>** to select the default server boot path.
- 12. Select **Yes** to save a backup of the old or existing driver.
- Press **Enter>** to continue when you see the message that the old driver will be saved.
 - NetWare copies the file.
- 14. What you just backed up was the old or existing .DSK file. Repeat Steps 12 and 13 for the .DDI file.
- 15. Select **No** to decline selection of an additional driver to install.
- 16. Exit INSTALL.NLM by pressing **Esc>** three times, then selecting **Yes** at the "Exit Install?" box.

This concludes installation of the driver files needed to run your Mylex Disk Array Controller under NetWare 4.11/4.2.

For more detailed information on operating system, driver installation, and GAM Server, see the *Disk Array Controller Software Kit Installation Guide and User Manual* (P/N 771929). To install the GAM client, (on a client Windows 95 or NT workstation) refer to the *Global Array Manager Client Software Installation Guide and User Manual* (P/N 771961).

Overview NetWare 5.0

This section provides information about the following:

- Installation procedures and the functionality of the Mylex Disk Array Controller drivers for Novell NetWare 5.0. The software is provided on the appropriate Software Kit distribution diskette.
- Installation, verification, and startup of the Global Array Manager Server software and utilities for Novell NetWare 5.0. The software is provided on the appropriate GAM Server distribution diskettes.

Mylex Disk Array Controller Driver Files for NetWare

All hardware installation, system configuration, and disk array controller configuration must be properly completed before proceeding with the NetWare driver installation. These basic installation procedures follow the Novell Installation manual, with only the few minor differences that are described in this section, Netware 5.0.

The subdirectory \NW on the NT/NW drivers diskette contains the following:

MDAC.HAM: The driver to support Mylex Disk Array Controllers

with NetWare 5.0.

MDAC.DDI: NetWare installation file for MDAC.HAM.

Tape and CD-ROM Support

Tape drive support is available to the Mylex Disk Array Controller under NetWare by means of the NWASPI driver module that provides ASPI compatibility. Most NetWare applications that communicate through ASPI on the server will work with the controller.

Similar to tape drive support, CD-ROM is also supported by the controller for use under NetWare. The NWASPI driver module must first be loaded to provide ASPI support to the CD-ROM application running on the server. An NWASPI driver and a CD-ROM driver will also have to be loaded. These are included with the Novell NetWare releases.

Mylex Disk Array Controller Driver for NetWare 5.0

Installing the Mylex Disk Array Controller as the Primary NetWare 5.0 Controller

If the Mylex Disk Array Controller will be the primary (bootable) controller, you must install the controller driver at the time of NetWare 5.0 installation.

Installing NetWare 5.0 Drivers

NetWare version 5.0 is available on CD-ROM. Drivers provided in the DOSformatted Software Utilities and Drivers diskette are required to install NetWare 5.0 from a CD-ROM drive connected to a Mylex Disk Array Controller.

The procedure below assumes that the CD-ROM drivers are available.

 Boot the system from a newly created DOS boot drive, and then create (or edit) the CONFIG.SYS and AUTOEXEC.BAT files to include the drivers required for accessing the CD-ROM as a logical drive under DOS. The following example assigns the CD-ROM as drive D: under MS-DOS 6.00 or above. CONFIG.SYS contains the statements:

```
device = [pathname]\aspidac.sys
device = [pathname]\btcdrom.sys /D:[devicename]
AUTOEXEC.BAT contains the statement:
[pathname]\mscdex /v /m:10 /D:[devicename]
```

The device name is that of the specific CD-ROM drive (e.g., MSCD001).

- 2. Boot the system with the new CONFIG.SYS and AUTOEXEC.BAT, and make sure the NetWare CD-ROM files are accessible under DOS.
- 3. Follow the standard NetWare 5.0 upgrade or installation procedure, as described in the NetWare 5.0 documentation.
 - While the files are being copied, a message will appear stating "matching drivers to hardware devices."

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- 4. Watch for the status screen that displays the drivers found for storage adapters:
 - · Select Modify
 - Select Storage Adapters
 - Delete the MDAC.HAM line entries
- 5. Press the Insert key two times in order to add new drivers from another source. Insert the NT/NW drivers diskette into the floppy disk drive when the installation program prompts you to insert the vendor-supplied disk. The installation program will scan the diskette for all available drivers. Select the NetWare 5.0 driver from the list.

MDAC.HAM

- Select the appropriate location for the new drivers (e.g. floppy, etc.).
- · Press Return.
- MDAC.HAM will be added from Software Kit 2.1.
- 6. After the NetWare 5.0 installation is complete, copy the files in the \NW subdirectory of the NT/NW drivers diskette to SYS:SYSTEM of the NetWare 5.0 server.
- 7. Return to the driver summary by pressing the arrow keys and select the option to continue.
- 8. Netware 5.0 will continue the installation.
- 9. Watch for another status screen that displays the storage devices (i.e., SCSIHD.CDM and SCSICD.CDM) and the network drivers:
 - Select Modify
 - Select Storage Devices
 - Press the Insert key
 - Select NWASPI.CDM (this driver is required to load GAM)
 - Press Enter
 - Return to the driver summary by using the arrow keys.

Installing Peripherals Under NetWare 5.0

Non-disk peripheral devices, such as tape or CD-ROM drives, can be installed on any channel of the controller. Each non-disk device will require a unique SCSI ID, different from any other non-disk device connected to the controller regardless of the channel.

- 1. The NetWare 5.0 NWASPI must be loaded. For example:
 - : load nwaspi.cdm



NWASPI.CDM must be loaded during startup, otherwise you will need to copy it from the Novell distribution CD-ROM.

- 2. After the *nwaspi* driver is installed, other appropriate drivers should be loaded before trying to access the non-disk devices. For example, to use NetWare's *Sbackup* utility, do the following:
 - : load mdac.ham
 - : load nwaspi
 - : load tsa500
 - : load tapedai
 - : scan for new devices
 - : load sbackup

Except for the *mdac.ham* driver, .NLM files are supplied by Novell. Refer to the Novell documentation for instructions on running *Sbackup*.

- 3. Load the following drivers (.NLM) to use a CD-ROM under NetWare 5.0 (the NLM, *CD-ROM*, is supplied by Novell):
 - : load mdac.ham
 - : load scsicd.cdm (in the startup file)
 - : load cdrom
 - : cd mount [volume name]

After the CD-ROM is mounted, the volume on the CD-ROM can be mapped from any workstation and accessed.

Installing the Mylex Disk Array Controller into an Existing NetWare 5.0 System

If NetWare 5.0 is already installed and you wish to add a Mylex Disk Array Controller later, the controller will be a secondary (non-bootable) controller. After installing the controller hardware and configuring a disk array, follow the procedure below to add the necessary controller drivers.

- 1. With NetWare Server 5.0 loaded and running, load the NetWare program by typing the following at the console prompt:
 - : load nwconfig and press **Enter**>.
- 2. Choose "Driver Options" in the Installation Options menu.
- Copy NWASPI.CDM (for GAM support) from the Novell distribution CD-ROM.
 - Be sure you are in this directory; \DRIVERS\STORAGE\ and copy to this directory; C:\NWSERVER.
 - Edit the STARTUP.NCF file by adding NWASPI.CDM.
 - Add LOAD NWASPI.CDM right after the line, LOAD SCSICD.CDM
- 4. Press the arrow keys to return to installation.
- 5. Choose "Configure disk and storage device drivers" in the Driver Options menu.
- Choose "Select an additional driver" in the Additional Driver Actions menu.
 - NetWare scans for controllers that do not have drivers already loaded.
- 7. At the "Select a driver" box, press **<Ins>** to choose to install an unlisted driver.
- 8. Insert the NT/NW drivers diskette into the diskette drive.
- 9. Press <**F3**> to specify the path of the NetWare driver you're about to install.

10. Change the path line to read:

A:\nw

and press **<Enter>**. NetWare scans for drivers on the floppy diskette in the specified path.

- 11. In the "Select a driver to install" box, select the following driver:
 - MDAC.HAM | Mylex Disk Array Controller HAM Driver
- 12. Select **Yes** at the confirmation box to install the driver.
- 13. Press **Enter** to select the default server boot path.
- 14. Select **Yes** to save a backup of the old or existing driver.
- 15. Press **<Enter>** to continue when you see the message that the old driver will be saved.
 - NetWare copies the file.
- 16. What you just backed up was the old or existing .DSK file. Repeat Steps 12 and 13 for the .DDI file.
- 17. Select **No** to decline selection of an additional driver to install.
- 18. Exit INSTALL.NLM by pressing **Esc>** three times, then selecting **Yes** at the "Exit Install?" box.

This concludes installation of the driver files needed to run your Mylex Disk Array Controller under NetWare 5.0.

For more detailed information on operating system, driver installation, and GAM Server, see the *Disk Array Controller Software Kit Installation Guide and User Manual* (P/N 771929). To install the GAM client, (on a client Windows 95 or NT workstation) refer to the *Global Array Manager Client Software Installation Guide and User Manual* (P/N 771961).

Windows NT

Installing the Mylex Disk Array Controller as the Primary Windows NT 4.x Controller

If the Mylex Disk Array Controller will be the primary (bootable) controller, you must install the controller driver at the time of Windows NT 4.x installation.

Before proceeding you should have already carried out the following steps:

- Installed the Mylex Disk Array Controller hardware, connected the disk drives to the controller and to each other, set drive SCSI IDs, and terminated the SCSI bus following the instructions in your Mylex Disk Array Controller hardware installation guide.
- Use RAID EzAssist to create a drive configuration and initialize the drives for use following the instructions in your *RAID EzAssist Configuration Utility User Reference Guide* (P/N 775029).

To install the controller driver during Windows NT 4.x installation:

- 1. Boot the system with the Windows NT 4.x setup diskette #1.
- 2. Insert setup diskette #2 when prompted and press **<Enter>**.
- 3. Press **<Enter>** again when prompted.
- 4. Select **Custom Setup** in the Windows NT Setup screen.
- 5. Next, choose **S** to skip the automatic detection scan.
- 6. Choose **S** to specify an additional device.
- 7. Choose **Other** in the list of supported adapters displayed and press **<Enter>**.
- 8. When prompted for the Manufacturer's supplied hardware support disk, insert the NT/NW drivers diskette into the floppy disk drive and press **Enter**>.
- 9. Select the Mylex Disk Array Controller Driver in the list and press **Enter>**.
- 10. Choose **S** to specify an additional device.
- Choose Other in the list of supported adapters displayed and press Enter>.

- 12. With the Software Kit diskette still in the floppy disk drive, press **Enter>**.
- 13. Select the Mylex Accelerated Disk Driver in the list and press **Enter>**.
- 14. If you have drivers to install for other controllers (for example, an onboard SCSI controller to run other devices such as a CD-ROM drive, etc.), repeat Step 6 and Step 7. Then when prompted, insert the manufacturer's supplied hardware support disk, press **Enter**>, and select the appropriate driver from the list.
 - If you have no other drivers to install, or when you have finished installing other drivers, simply press **Enter>** to continue installation.
- 15. Insert Windows NT 4.x setup diskette #3 when prompted.
- 16. Follow the on-screen instructions to continue Windows NT 4.x installation, inserting the Windows NT CD-ROM into the CD-ROM drive when prompted. Press <**Enter>** and continue with the next few Windows NT 4.x installation screens.
- 17. When prompted again for the "DAC960 Software Kit" diskette, insert the NT/NW drivers diskette into the floppy disk drive and press **Enter>**.

If you installed other drivers from other diskettes, you will be asked to reinsert those diskettes as well.

This concludes Mylex Disk Array Controller driver installation for Windows NT 4.x. Follow the on-screen instructions to complete your installation of the Windows NT 4.x operating system.

For more detailed information on operating system, driver installation, and GAM Server, see the *Disk Array Controller Software Kit Installation Guide and User Manual* (P/N 771929). To install the GAM client, refer to the *Global Array Manager Client Software Installation Guide and User Manual* (P/N 771961).

Installing the Mylex Disk Array Controller into an Existing Windows NT 4.x System

If Windows NT 4.x is already installed and you wish to add a Mylex Disk Array Controller later, the controller will be a secondary (non-bootable) controller. After installing the controller hardware and configuring a disk array, follow the procedure below to add the necessary controller drivers.

- 1. Make sure Windows NT 4.x is up and running.
- 2. Click **Start**, and select **Settings->Control Panel** within the Start menu.
- 3. From the Control Panel window, double-click the SCSI Adapters icon.
- 4. In the SCSI Adapters box, click the **Drivers** tab to bring the Drivers page to the foreground.
- 5. With the Drivers page in the foreground, click **Add**.
- 6. The Creating driver list progress bar is displayed briefly, and then the Install Driver box is displayed.
- 7. In the Install Driver box, click **Have Disk**.
- 8. Insert the NT/NW drivers diskette into the floppy disk drive.
- 9. From the Install From Disk box, change the path to A:\NT and click **OK**.
- 10. From the Install Driver box, be sure the Mylex Disk Array Controller is selected and click **OK**.
- If there is an existing Mylex driver in the system you will see a Windows NT Setup box. Click **New** to install the new driver from the diskette.
- Again, be sure the path is A:\NT and click Continue.
 The driver is copied from the diskette. The System Settings Change box is displayed.
- 13. Click **No** at this time, because you will need to install the Mylex Accelerated Driver before restarting Windows NT 4.x.
- 14. With the Drivers page in the foreground, click **Add**.

- 15. The Install Driver box is displayed.
 - In the Install Driver box, click Have Disk.
- 16. Reinsert the NT/NW drivers diskette into the floppy disk drive if requested.
- 17. From the Install From Disk box, change the path to A:\DISK and click **OK**.
- 18. From the Install Driver box, be sure the Mylex Accelerated Disk Driver is selected and click **OK**.
- 19. If there is an existing Mylex driver in the system you will see a Windows NT Setup box. Click **New** to install the new driver from the diskette.
- 20. Again, be sure the path is A:\DISK and click **Continue**.
 - The driver is copied from the diskette. The System Settings Change box is displayed.
- 21. Remove the diskette and click **Yes** to restart Windows NT 4.x for the new Mylex Disk Array Controller drivers to be available.

For more detailed information on operating system, driver installation, and GAM Server, see the *Disk Array Controller Software Kit Installation Guide and User Manual* (P/N 771929). To install the GAM client, refer to the *Global Array Manager Client Software Installation Guide and User Manual* (P/N 771961).



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